

2 Introduction

The NE 3rd-4th Corridor extends east from the Sunset/3rd intersection, immediately west of I-405, to Renton's East City Limit, which currently is located between Rosario Ave and 156th Ave (see Figure 1 and Figure 2). This corridor is affectionately and historically known by locals as Cemetery Hill Road.

The east side of the City of Renton, including the area served by NE 3rd-4th Street, has experienced substantial residential and commercial growth in the last ten years. This growth has spawned or aggravated a number of transportation system problems and deficiencies in the corridor:

- Traffic congestion and operational and safety problems (especially those involving left turns) have been increasing along the entire corridor.
- An incomplete sidewalk system, deficient width and buffering on some existing sidewalks, a lack of crosswalks, and the absence of roadway shoulders and bike lanes inhibits or precludes comfortable convenient pedestrian and bicycle circulation in the corridor.
- The existing streetscape throughout the corridor is a mixture of design schemes. The streetscape lacks a consistent and aesthetically pleasing atmosphere important to creating a livable community.
- The lack of a Corridor Design Plan for NE 3rd-4th has reduced opportunities for coordinated street improvements associated with new development.

2.1 Purpose

The purpose of the NE 3rd-4th Corridor Project is to develop a comprehensive set of street, traffic control, and bicycle and pedestrian improvements and actions that will address the existing and future access and circulation needs of the project corridor. The primary study area for the project comprises NE 3rd-4th Street from Sunset Blvd on the west to the east city limits. However, the impacts and implications of growth and traffic in a broader corridor extending north, south, and east of the primary study area also will be considered.

2.2 Project Justification

This project will identify much-needed transportation improvements in a high-growth corridor. The project is intended to increase the existing roadway and intersection capacity (where possible); improve signal coordination; reduce traffic accidents; enhance neighborhood livability through design; and improve safe access to businesses and prepare for additional growth.

This project is consistent with City of Renton Business Plan Goal themes, because it is intended to support economic development, improve the City's image in the community and the region, and meet the service demands that contribute to the livability of the community.

2.3 Project Objectives

Five basic project objectives were identified:

1. Develop a comprehensive set of street improvements that will address existing and future vehicle, bicycle and pedestrian needs
2. Assess and plan for future growth occurring in the City of Renton and in the City's Potential Annexation Area
3. Develop a corridor improvement program that is accepted and embraced by the community, by the City of Renton, and by other transportation agencies
4. Identify and implement short-term upgrades to improve corridor safety and vehicle flow
5. Identify and program long-term street improvement needs

2.4 Issues Addressed

An initial set of 12 issues/needs that are to be addressed by the NE 3rd-4th Corridor Project was listed by City staff:

- Accommodate demands of increasing traffic volumes
- Evaluate current speed limits
- Facilitate transit flow and reduce delays
- Identify streetscape improvements that enhance appearance
- Improve pedestrian crossing safety and convenience
- Assess the need for park-and-ride lots
- Identify/evaluate sidestreet locations
- Identify/evaluate driveway locations
- Improve safety for turning vehicles
- Improve and complete sidewalk system
- Improve Transit Stops
- Assess provisions for bicycles

In addition, the public also was asked to identify corridor issues and needs. The list of issues/needs identified by the public at a November 14, 2002, Open House (which was held at Renton Technical College) is compiled in Appendix A.



Photo 3 – NE 4th Street, looking east adjacent to Greenwood Memorial Cemetery

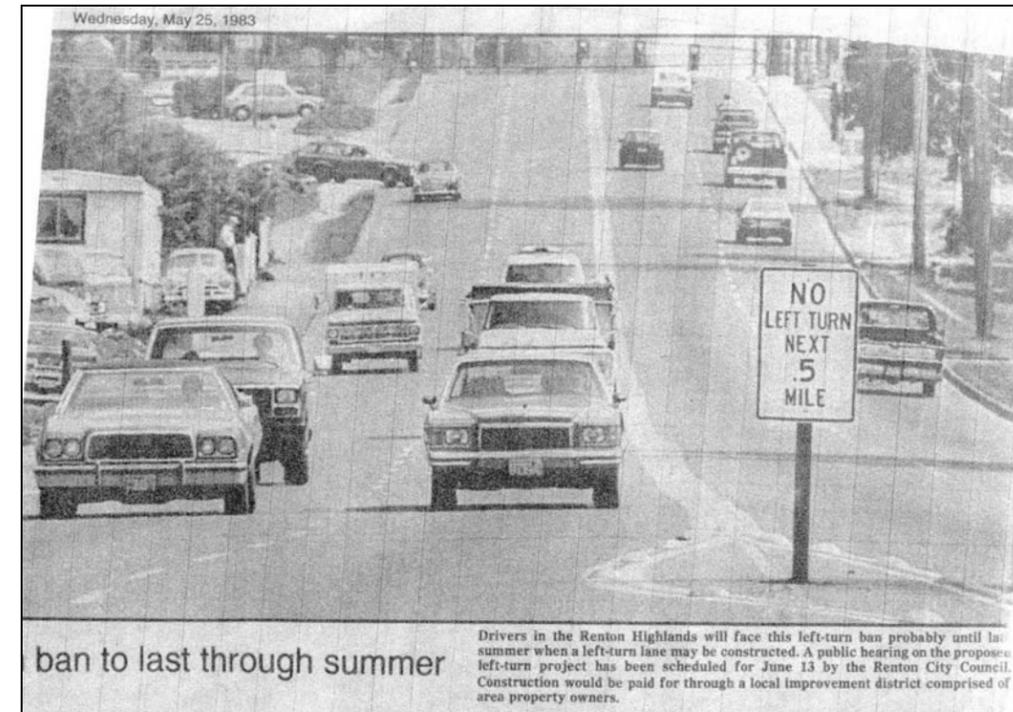


Photo 5 – Daily Record Chronicle, Wednesday, May 25, 1983

Caption reads: “Drivers in the Renton Highlands will face this left-turn ban probably until late summer when a left-turn lane may be constructed. A public hearing on the proposed left-turn project has been scheduled for June 13 by the Renton City Council. Construction would be paid for through a local improvement district comprised of area property owners.”

Note the mobile home park on the left, the power poles on the right, and the Union Ave traffic signal in the distance. The picture is looking east.



Photo 4 – NE 4th Street, looking west at Windermere office

Study Area

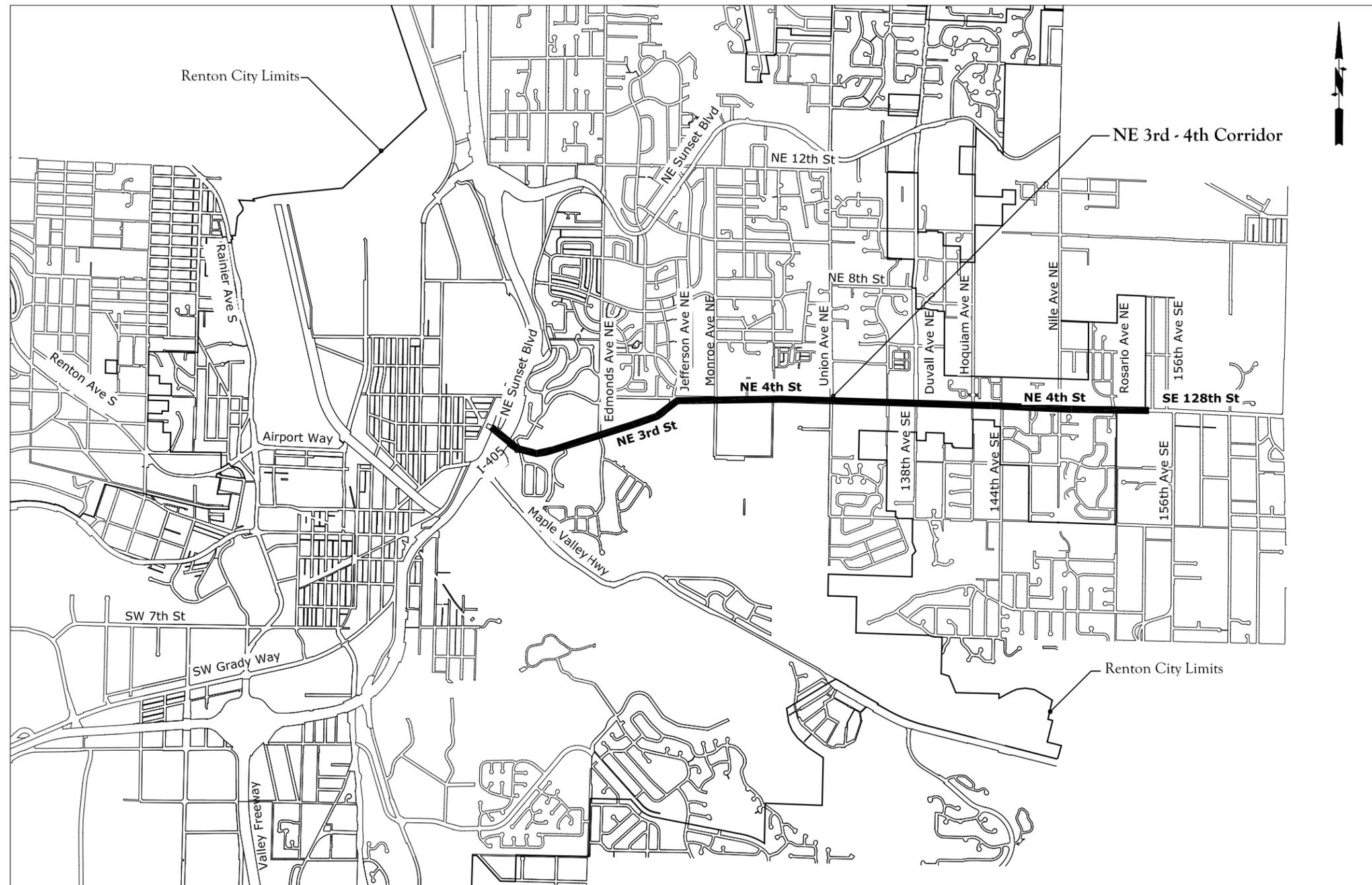
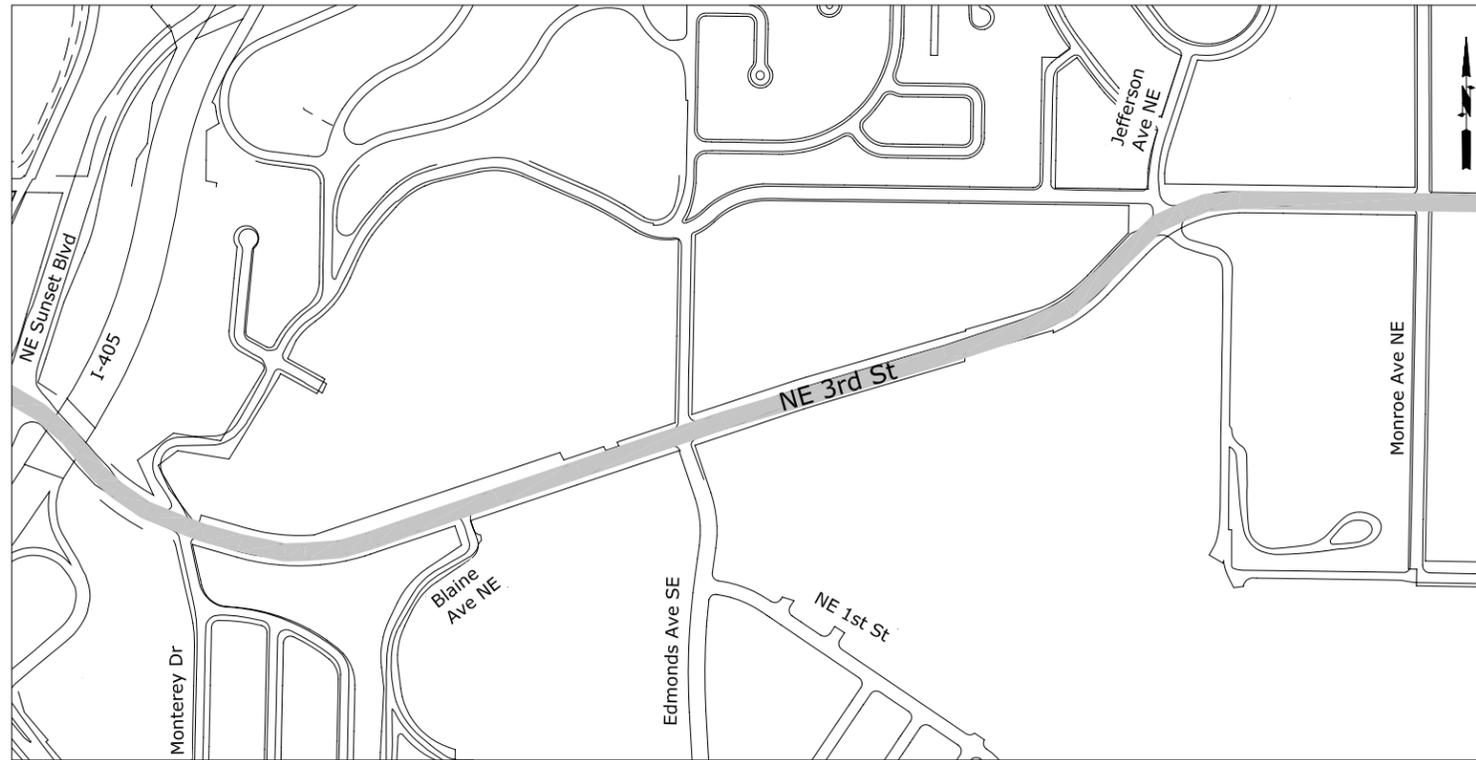




Photo 6- NE 4th Street looking east at Eastway Center



Photo 7 – NE 4th Street, looking east at Union Ave intersection
Note narrowed lanes approaching Union Ave.



NE Sunset Blvd - Monroe Ave NE



Monroe Ave NE - Duvall Ave NE



Duvall Ave NE - East City Limits

Study Corridor





Photo 8 – NE 4th Street, looking east, segment in front of Safeway.



Photo 9 – NE 4th Street, looking east at Duvall Ave intersection,
segment in front of QFC.

2.5 Corridor Conditions Report

Prior to development of the NE 3rd-4th Corridor Improvements, a “*Corridor Conditions Report*” was prepared, in which was compiled (i) an inventory of roadway facilities and traffic controls, (ii) an inventory of transit services and facilities, (iii) a list of transportation system improvements planned and programmed for the corridor, (iv) an analysis of existing traffic operations in the corridor, (v) an assessment of future traffic volumes and needs in the corridor, and (vi) an overall evaluation of the existing corridor transportation system.

The NE 3rd-4th *Corridor Conditions Report* is found in Appendix F and summarized below:

2.5.1 Inventory of Facilities

An inventory of roadway characteristics, traffic controls, and pedestrian and transit facilities was prepared for use in the NE 3rd-4th Corridor project. The inventory included:

- street rights-of-way
- traffic signals
- driveways
- corridor buildings and property lines
- approach lane configurations at signalized intersections
- cross-streets and sidestreets
- marked crosswalks
- bus stops
- sidewalks

2.5.2 Transit Service

King County Metro Transit (KC Metro) provides scheduled fixed route and demand-responsive bus service in the study corridor. The KC Metro service comprises the three regular fixed routes and two demand-responsive (DART) routes:

- Route 105: Renton Transit Center, Renton Technical College, Renton Highlands
- Route 111: Downtown Seattle, Newport Hills P&R, Renton Highlands P&R, Renton Highlands, Maplewood Heights, Lake Kathleen
- Route 114: Downtown Seattle, Coal Creek Parkway SE, Newport Hills, Lake Boren, Renton Highlands
- Route 908: (DART Service) Maplewood, Renton Highlands, Renton Technical College, Renton Transit Center
- Route 909: (DART Service) Kennydale, Renton Highlands, Renton Transit Center

2.5.3 Transportation System Improvements

The City of Renton and WSDOT are developing and planning a number of transportation system improvements that directly affect the NE 3rd-4th corridor. Some of these improvements are included in the

City’s 2003-2008 Transportation Improvement Program (TIP), and are slated for construction within the next six years. Other improvements are long-range in nature, and are in earlier stages of planning.

Renton TIP projects include SR 169 Transit Priority and HOV lanes, Duvall Ave widening, Sunset/Anacortes intersection improvements, Sunset Corridor improvements, NE 8th St improvements, and NE 4th/Hoquiam intersection improvements.

Long-range projects and projects in earlier stages of planning and development that affect the NE 3rd-4th corridor include the I-405 Corridor program and a Renton Highlands street network completion program.

2.5.4 Analysis of Corridor Functions

The *Corridor Conditions Report* evaluated overall functioning of the NE 3rd-4th Corridor by analyzing six key characteristics of corridor activity: daily and peak NE 3rd-4th and cross-street traffic volumes; origin-destination pattern of NE 3rd-4th traffic; intersection traffic operations; traffic accident history; traffic flow through the corridor; and pedestrian and bicycle circulation.

Traffic Volumes: A complete set of existing (2001) daily traffic volume data was compiled and analyzed in the *Corridor Conditions Report*.

Traffic Patterns: The origin-destination pattern of NE 3rd-4th traffic was of significant interest: understanding these patterns was uniquely useful in developing and evaluating project alternatives. The *Corridor Conditions Report* analyzed origin-destination pattern of p.m. peak hour peak direction (eastbound) traffic, as determined by the City of Renton traffic forecasting model.

Traffic Operations: The *Corridor Conditions Report* evaluated NE 3rd-4th existing traffic operating conditions based on analysis of (i) traffic operations at signalized intersections, (ii) traffic flow through the corridor, and (iii) traffic accident records.

Pedestrian and Bicycle Circulation: The *Corridor Conditions Report* evaluated the City of Renton Non-Motorized Plan, which identifies pedestrian and bicycle facilities in the City.



Photo 10 – NE 4th Street, looking west at Hoquiam Ave

(note the bicycle lane and the bus pullout which is on the farside of the Hoquiam Ave intersection)



Photo 11 – NE 4th Street, looking west at Rosario Ave

2.5.5 Assessment of Future Demands

In addition to analysis of existing conditions, the Corridor Conditions Report also analyzed future (2020) “baseline” conditions (i.e., conditions in the future with planned/forecasted growth and the implementation of currently-planned/programmed transportation system improvements). The future baseline conditions analysis comprised forecasts of future traffic volumes and an analysis of future intersection traffic operations. In addition, an analysis of the potential impacts of alternative Renton Highlands growth/development scenarios (i.e., alternative development densities) and an initial analysis of potential impacts of an expanded Renton Highlands arterial system were prepared.

Future Traffic Volumes. The City of Renton traffic forecasting model was used to prepare 2020 traffic forecasts.

Future Traffic Operations. The analysis of future (2020) traffic operations focused exclusively on signalized NE 3rd-4th intersections. (see also Appendix G)

Future Development Impacts. The City of Renton is considering amending its Comprehensive Plan to provide higher residential densities in the Renton Highlands area east of I-405 and south of Sunset Blvd (SR 900). The *Corridor Conditions Report* included an analysis of two higher-density scenarios, one scenario that would increase current R2 densities to R5, and a second scenario that would increase the current density to R8. The Renton Traffic Forecasting Model was used to prepare Year 2020 p.m. peak hour traffic forecasts for the scenarios.

Future Arterial System Improvements. The City of Renton is considering the merits of developing an “enhanced” (more dense) street network in the rapidly-developing Renton Highlands area east of I-405 and south of Sunset Blvd (SR 900). The *Corridor Conditions Report* included a preliminary assessment of the potential traffic impacts of an enhanced street network (based on Year 2020 p.m. peak hour traffic forecasts for the planned network and an enhanced network).

2.5.6 Evaluation of Existing System

Several key findings were derived from the NE 3rd-4th Corridor existing conditions analyses:

- Heavy volumes on Sunset Blvd create severe congestion at the 3rd/Sunset intersection; the delays and queuing on NE 3rd associated with this congestion impacts traffic operations and safety at the NE 3rd/Monterey–Bronson intersection and on westbound NE 3rd Street east to Edmonds Ave. (These problems are exacerbated by high speeds and limited sight distance on the long, steep NE 3rd Street downgrade from Jefferson to Sunset.)
- The majority of traffic westbound on NE 3rd Street west of Jefferson (the “hill climb” section) is destined to the Renton city center or points south on I-405.
- NE 4th Street from Jefferson to the ECL generally has adequate roadway and intersection capacity to accommodate current traffic volumes; however, forecasted future traffic volumes will overwhelm key intersections, such as Monroe Avenue, Union Avenue and Duvall Avenue. (There are some existing “site-specific” congestion problems that should be addressed; e.g., brief periods of morning and noontime congestion at the NE 4th/Monroe intersection associated with Renton Technical College access.)
- Left turn conflicts cause localized safety (accidents) and congestion problems at driveways and sidestreets along the fully-developed segment of NE 4th Street east of Jefferson. Such conflicts and problems will spread east as the eastern end of the corridor grows and develops.
- Pedestrian access and circulation in the corridor is hampered by missing and inadequate sidewalk segments and by inconvenient crosswalks at various locations.
- Bicycle travel through the corridor is discouraged by the lack of bicycle facilities.
- Rezoning portions of the Renton Highlands to higher residential densities will result in minimal or limited *additional* traffic growth above the forecasted significant traffic growth in 2020 under the existing Comprehensive Plan.



Photo 12 – Example of Left Turn/U-Turn Lane
(Bridgeport Way, University Place, WA)



Photo 14 – Example of Combined Uphill Sidewalk/Bike Lane
(SE 274th St, Kent, WA)



Photo 13 – Example of Emergency Vehicle Crossover Median Break
(Park Ave N, Renton, WA)



Photo 15 – Example of Bike Lane / Right Turn Lane
(SE 56th Street & 10th Avenue NW, Issaquah, WA)
(Inset – Blue Paint Treatment, Broadway Bridge, Portland, OR)

3 Alternatives Considered

Four basic access management and traffic control design concepts were developed for the NE 3rd-4th corridor. In addition, based on input from the public and from City staff, a “menu” of street and traffic control alternatives was developed for several ‘categories’ of improvements and actions. These “menus” were used to construct the recommended plan.

3.1 Corridor Access Management and Traffic Control Concepts

All Concepts

Refine signal timing/phasing efficiency

Identify opportunities to consolidate driveways

Concept 1

Primary purpose: maintain smooth traffic flow through the corridor

Design concept: install raised medians (with turn pockets at arterials and selected sidestreets)

Concept 2

Primary purpose: maintain smooth traffic flow through the corridor

Design concept: limit new driveway and sidestreet connections

Concept 3

Primary purpose: eliminate congestion and conflict at major intersections

Design concept: add channelization, prohibit left turns on approaches to signalized intersections

Concept 4

Primary purpose: maximize access to/from NE 3rd-4th

Design concept: retain existing street “as is”

3.2 Intersection and Location-Specific Improvement Alternatives

NE 3rd, Edmonds – Sunset

- Westbound 3rd, Edmonds – Sunset: speed control, safety
- 3rd/Bronson–Monterey: pedestrian crossing improvements, safety improvements
- 3rd/Sunset: reconfigure westbound approach

3rd/4th/Jefferson intersection

- realign, reconfigure, add landscaping in triangles

4th/Monroe intersection:

- reconfigure and improve pedestrian crossings (improve RTC access), accommodate future volumes

4th/Union intersection

- improve sight distance, improve pedestrian crossings, accommodate future volumes

4th/Duvall intersection

- improve sight distance, improve pedestrian crossings, accommodate future volumes

3.3 New Roadways

Highlands arterials

- Expand Renton Highlands street network

Jericho-Hoquiam connector

- Direct link between Hoquiam (142nd SE) and Jericho (144th SE)

156th Ave extension

- Extend a north-south route east of Duvall (156th Ave SE, 164th Ave SE, or other) north to May Valley Rd and designate it and May Valley Rd as a north-south arterial route connecting Bellevue/Newcastle (Coal Creek Pkwy) and Maple Valley Hwy (SR 169), complementing the currently-designated Duvall Ave and NE 4th St route

3.4 Transit Facilities

All bus stops

- Improve pedestrian access to/from stops
- Install shelters
- Improve pedestrian crossings

Rideshare Facility

- Locate a rideshare facility toward the eastern end of the corridor to provide travelers a rideshare option before traveling through the NE 4th corridor, the Renton city center, and I-405.

3.5 Pedestrian Facilities

Sidewalks

- Complete sidewalks on both sides of NE 3rd-4th
- Complete sidewalks on NE 3rd-4th cross-streets
- Buffer existing sidewalks

Crosswalks

- Improve pedestrian crossings at bus stops and intersections

3.6 Bicycle Facilities

Bicycle route/lane, Sunset–Monroe

- Bike route off NE 3rd
- Pedestrian/bike path in NE 3rd r-o-w
- Bike lanes on NE 3rd (Class II or Class III)

Bicycle route/lane, east of Monroe

- Bike route off NE 4th
- Bike lanes on NE 4th (Class II or Class III)



Photo 16 – Example of Emergency Vehicle Crossover Median Break
(148th Ave SE, Bellevue, WA)



Photo 18 – Example of 4' Raised Landscaped Median
(Bridgeport Way, University Place, WA)



Photo 17 – Example of Mid-Block Median Break with Left Turn Lanes
(Bridgeport Way, University Place, WA)



Photo 19 – Example of 10' Sidewalk with Buffer (6' Pavement/ 4' Landscape)
(Bridgeport Way, University Place, WA)

4 Community Involvement

In order to keep the community integrally involved in the NE 3rd-4th Street corridor planning process, three public open houses were held over the course of the project. (All three open houses were held at Renton Technical College.)

Open House #1. An initial open house was held November 14, 2002, at which the public was invited to learn more, give input on problems and issues that should be addressed, view background information on corridor conditions, and review the types of improvements and strategies available. Presentation material included the *Corridor Conditions Report*, large plots of figures from the *Corridor Conditions Report*, and potential improvement concept displays (Medians, Crosswalks and Curb Extensions, Pedestrian Refuge Islands, Bus Stop Improvements, Bicycle Facilities, Street Trees and Furniture, Street Lighting, Banners and Flower Baskets - as shown in Photo 14). (Open House #1 comments are compiled in Appendix A.)

Open House #2. The second open house was held March 4, 2003. The primary purpose of Open House #2 was to give the public an opportunity to review and comment on the street, traffic control, and bicycle/pedestrian improvement concepts that were being developed. (Open House #2 comments are compiled in Appendix B.)

Open House #3. The third open house was held June 18, 2003. The primary purpose of this final open house was to present to the public the street, traffic control, and bicycle/pedestrian improvement concepts developed by the project team, and to collect public comment on proposed recommendations to the Renton City Council. Presentation material included large plots of Figures 3-6 in this report. (Open House #3 comments are compiled in Appendix C.)

In addition to the three “formal” open houses, city staff talked with and met with individual property owners and corridor residents as requested and needed throughout the course of the project.

The three “formal” open houses were advertised with postcard mailings to corridor businesses and with announcements on the City’s website, in the Renton Reporter (City Source), in the King County Journal, and once in the Seattle Post-Intelligencer (O.H. #3). (Open house materials are compiled in Appendix D.)

Figure 7 in this report, the NE 3rd-4th Corridor Improvements Conceptual Layout Plan, was developed after the open house process.



Photo 20 – Open House #1, Presentation Material of Potential Improvement Concepts (Renton Technical College)



Photo 21 – Sketch of Renton Highlands Gateway Sign (courtesy Renton Highlands Neighborhood Association)